# Common Representation of Battle Space Data via Joint Common Data Base (JCDB) Models & Segments

# *Common* Representation - "Logical to Physical" Both Structure and Models - Content A Key to Interoperability

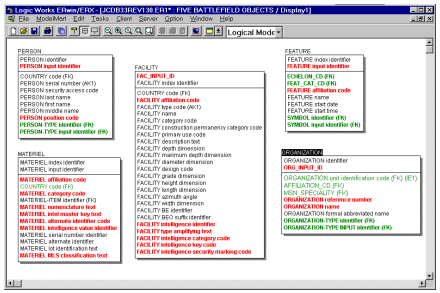
**That *Unlocks***

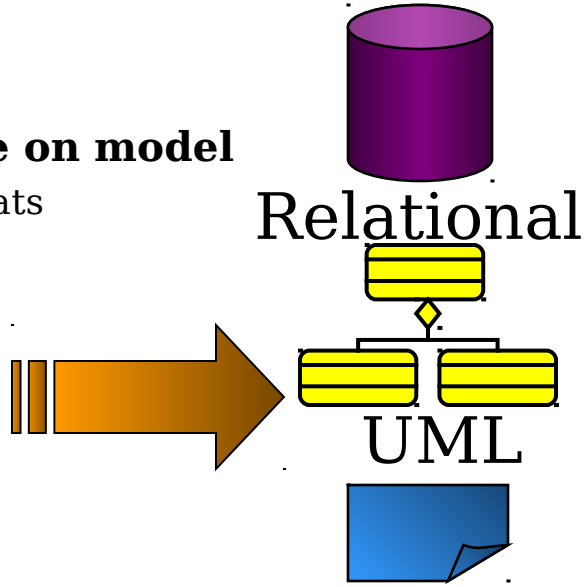
- **Data Management,**
- **Data Mediation, and**
- **Data Exchange Technologies**

# What's our Goal? Data Sharing not Data Standards

## Common Semantics, Multiple Forms

- **Focus on what is required to *physically* share data**
- **Common logical specification, same semantics, incremental 8320 Standards refinement for primary Battlefield Objects:**
  - Organization ("Unit" and below)
  - Person (personnel)
  - Material (equipment and consumables)
  - Facility
  - Feature
- **Key C2/I and Combat Support developers agree on model**
  - Model can morph to multiple data and metadata formats
    - RDBMS
    - Flat File
    - UML
    - XML
    - APIs/Interface Definitions





# Proposed Refinements to COE Data Compliance *measures*


**COE Compliance Level**

**8** ***(Enterprise)*** **Data reconciled with DoD Enterprise Model**

7 ***(Domain)*** **Data is consistent within defined & registered community of interest (e.g., Intelligence, Logistics, Finance)**

**6** ***(Functional)*** **Documentation includes required data model.**

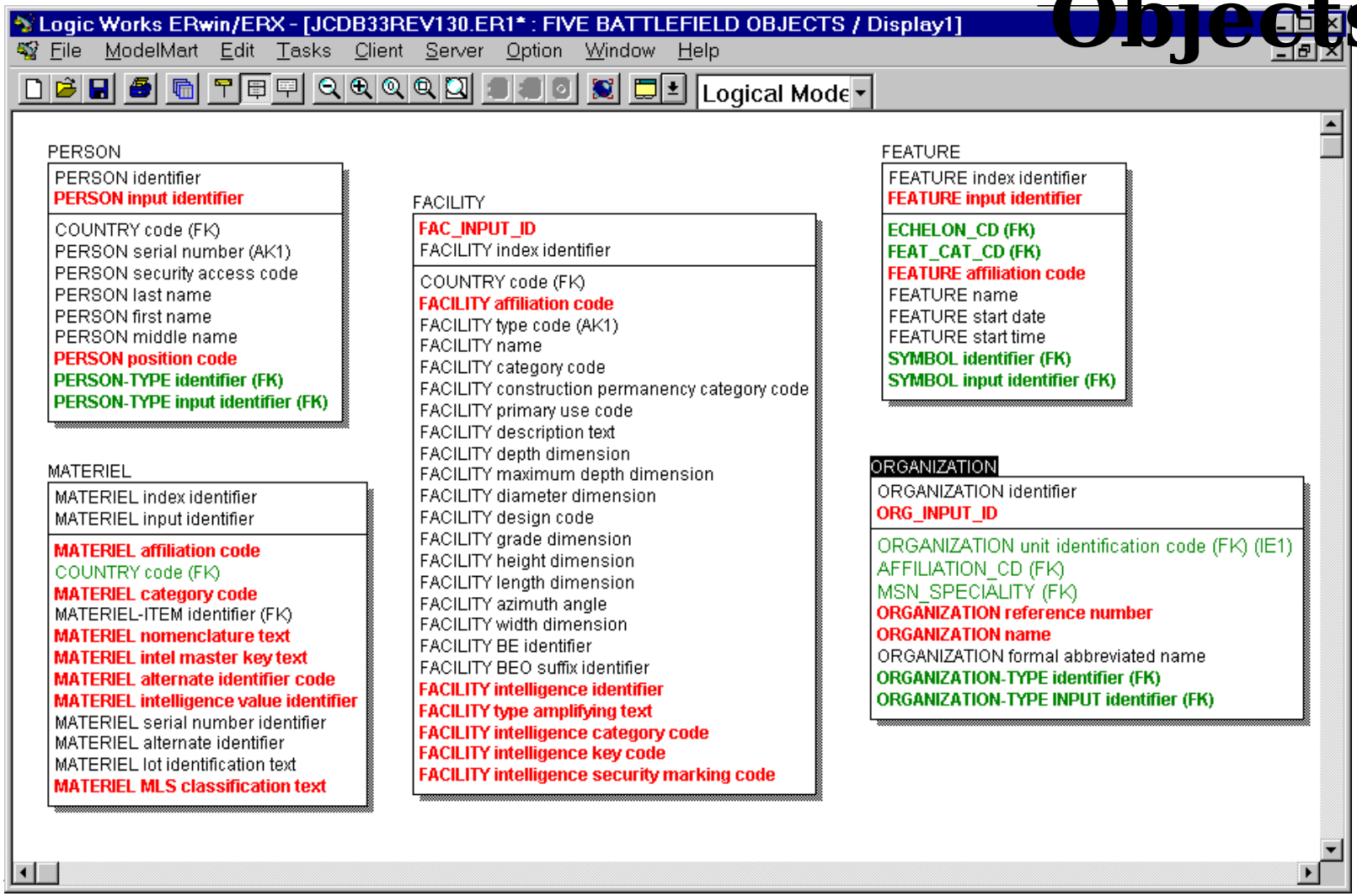
**5** ***(Connected)*** **Data is stored separately from application(s) and available via published APIs**

High

Interoperability

Low

# JCDB Model Contains Five Primary Battlefield Objects



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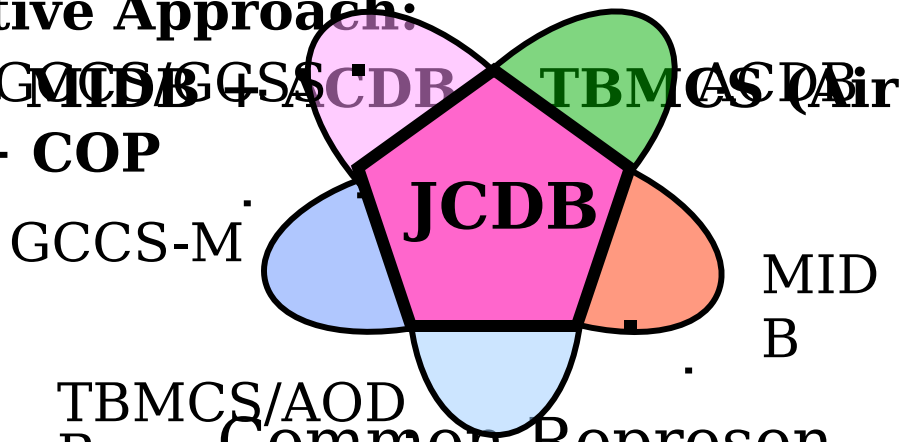
# JCDB - A Baseline Relational Instance of a Common Representation

- **Practical physical implementation with key Development Team buy-in**
  - Broad potential for Re-use in DB Segment form
- **Arena to Resolve COE-Data Standardization Guidance Disconnect**
  - Candidate Level 8 Database Segment
  - Reasonable relationship between Data Standards and COE compliance
- **Collaborative Approach:**

**JCDB v1 = MIDB + ACDB + TBMCS (Air Ops) + GCCS-M + COP**



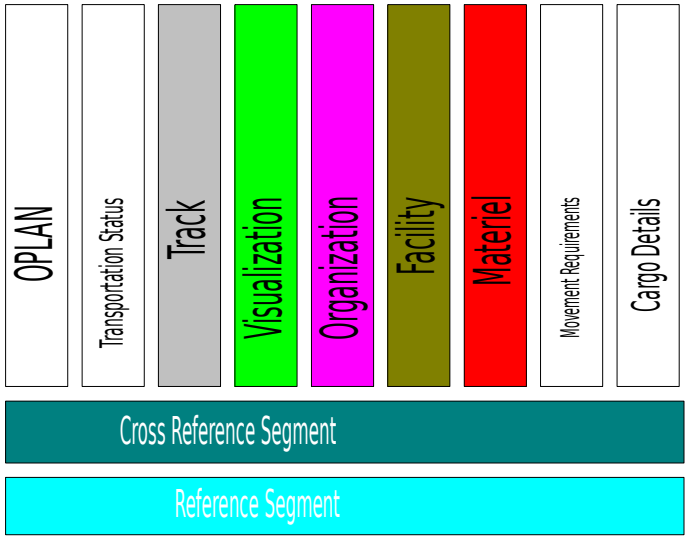
# JCDB Coordination History

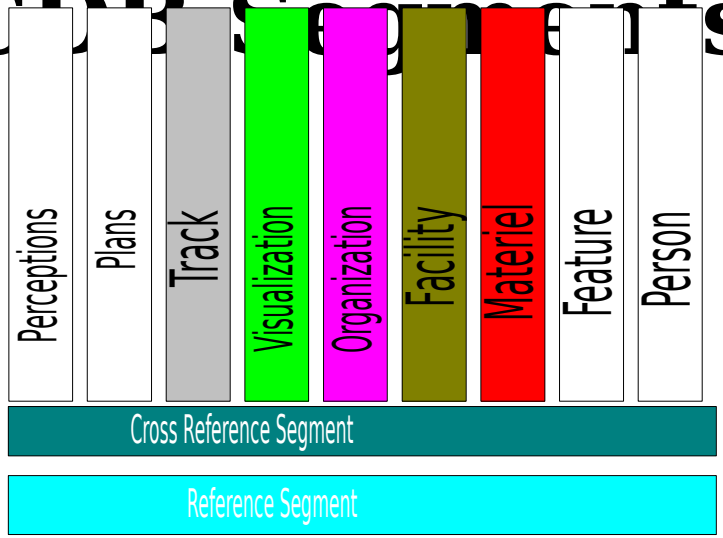
| DATE | EVENT(S) |
|---|---|
| 22 Apr | JIIB requests COE/SHADE explore MIDB-ACDB resolution |
| mid-May | COE/SHADE team coordination with CFS Data Standards, DIA and Army ASAS management/data engineers |
| 29 May | CFS Data Standards hosts initial DISA-Army-DIA meeting |
| | - technical approach agreed |
| | - data engineering resources committed |
| Early Jun | Army-DIA technical coordination begins |
| | - focus on major battlefield objects |
| | - organization (“units”) first priority |
| 17 Jul | 2nd CFS-hosted DISA-Army-DIA status meeting |
| | - decision to expand technical coordination |
| 17 Sep | Navy hosts technical exchange meeting |
| | - major C2I systems data team reps agree on approach |
| Early Nov | - Latest JCDB version distributed to C2I partners |

# JCDB Coordination History (continuing)

| DATE | EVENT(S) |
|---|---|
| 12 Nov | 3rd CFS hosted meeting<br>- includes DISA-Army-DIA-Navy-USAF and USMC<br>- JCDB effort endorsed; Army to explore EA role |
| 5 Jan | AF interoperability experiment |
| mid-Jan | CFS hosted meeting to address sponsorship/CM issues |
| 12-13 Jan | COE JCDB Segmentation assist team visits Ft. Monmouth |
| 20 Feb | Initial JCDB Segment available |
| 23 Feb | Initial analysis meeting for Segment decomposition<br>- Based on Primary Battlefield Objects<br>- Dependencies for Modular Implementation |
| 25 Feb | Update JOPES 2000 Schema<br>- use of tables from JCDB Segment<br>- cross-reference links to OPLAN data |
| 15 Mar | DISA Input to STOCard Update Package |

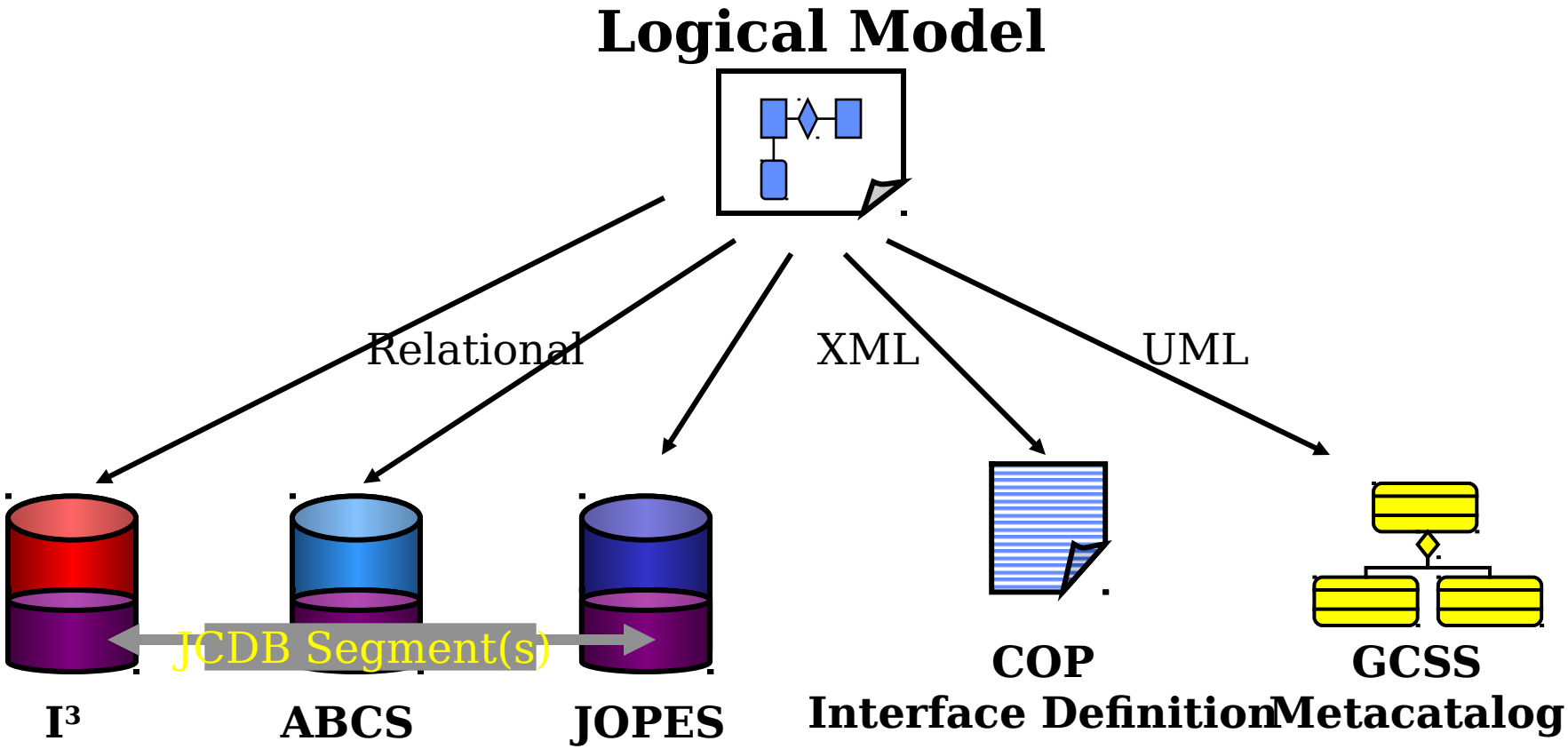
# Potential Relationship Between JOPES 2000 and JCDB Segments




- **Single segment for static reference tables**
- **Cross reference segment for dependencies and links**
- **Dynamic segments for relevent objects**

# Improved Data Sharing via Model Management




**Common Logical Representation can spawn physical schema for multiple COE-based system requirements**

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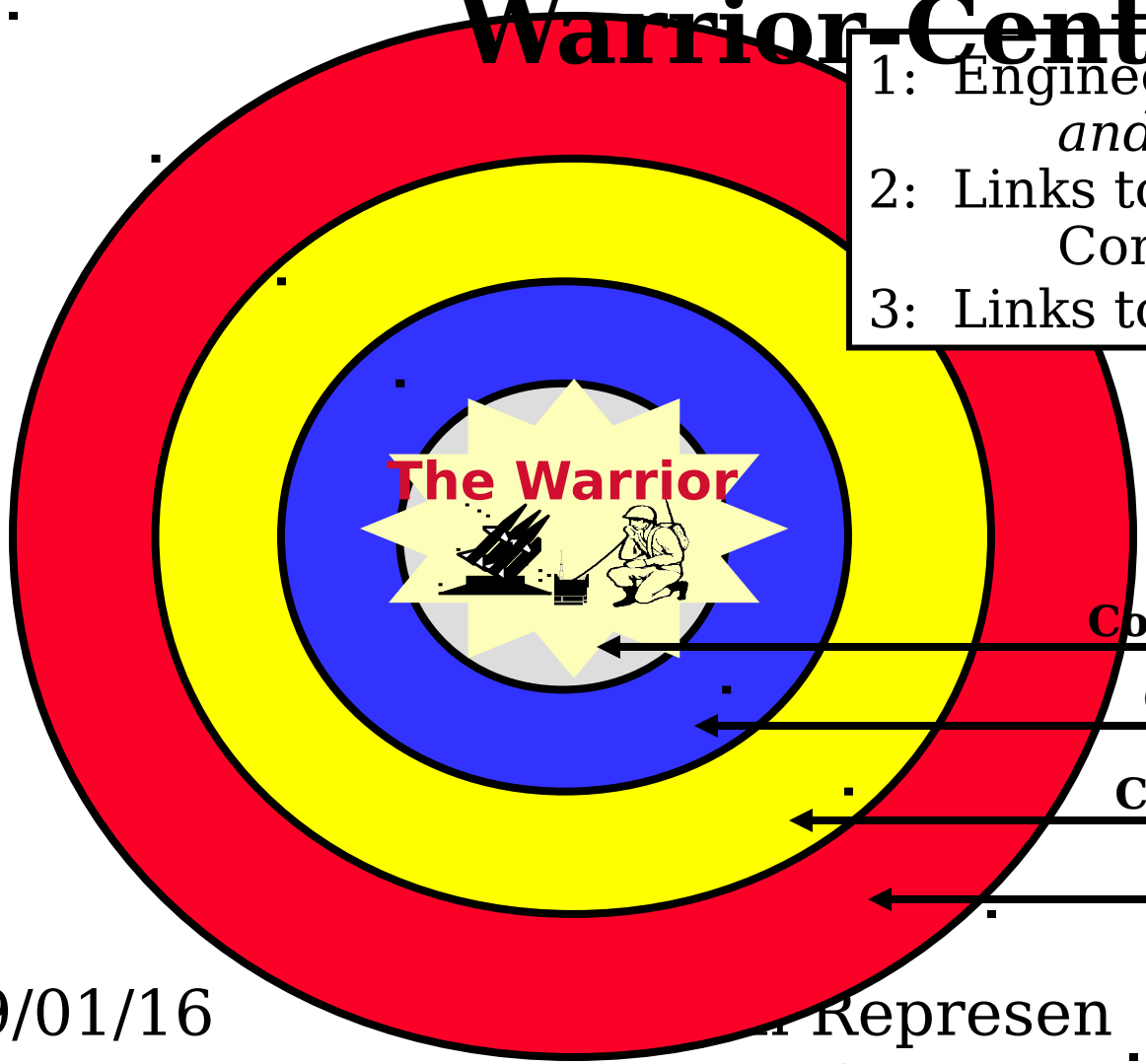
# Questions?

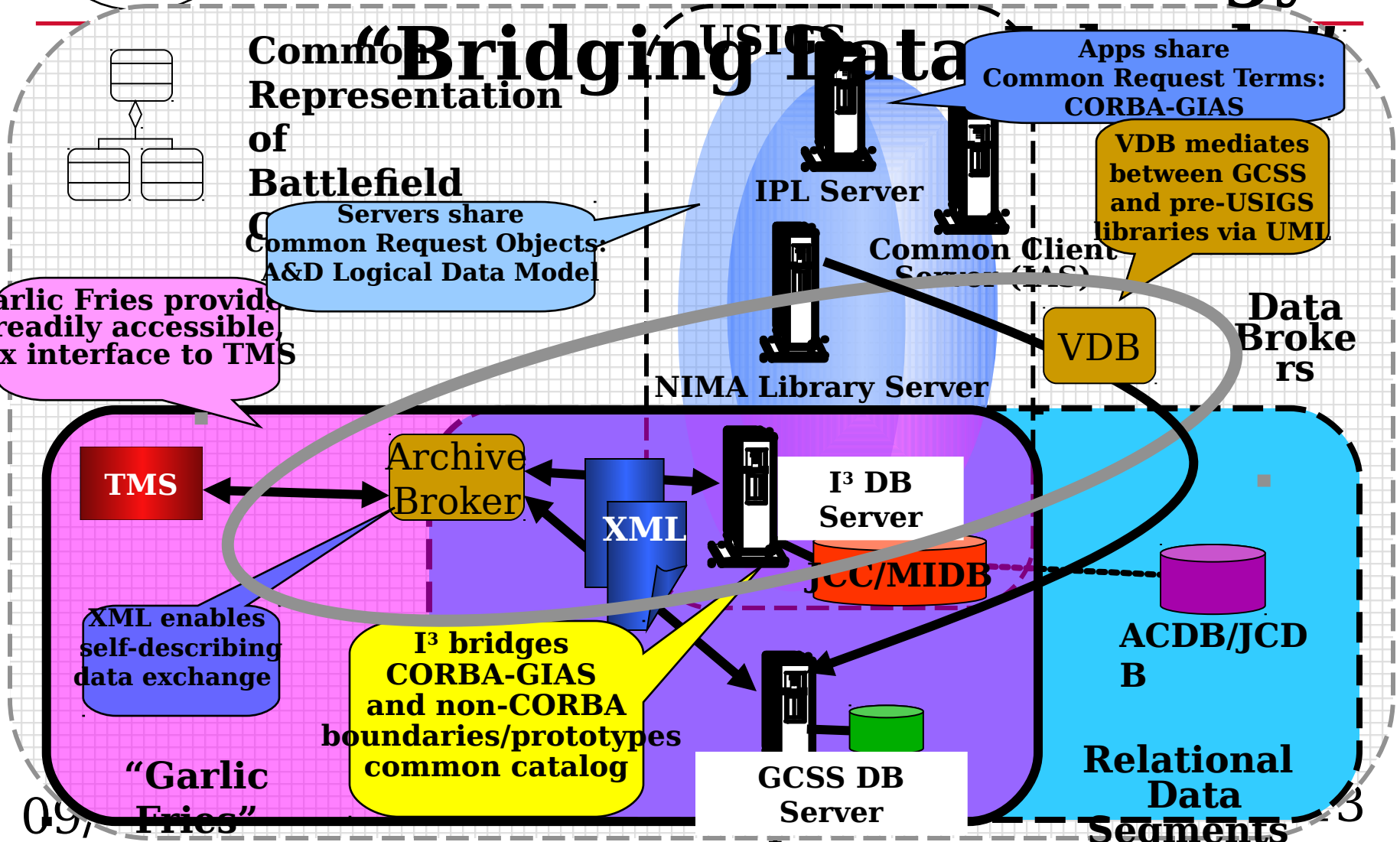
# Common Representation uses:

## Warrior-Centric Focus

1: Engineering Primary C2/I sys
*and* Combat Support
2: Links to *and* engineering sele
Combat Systems/MPS
3: Links to sustaining base



# Data Engineering Strategy



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# Use of JCDB Segment to create Common Representation